

REMARKS

Applicant respectfully requests reconsideration of this application as amended. Claim 17 has been amended. No claims have been cancelled. No new claims have been added. Therefore, claims 1-30 are presented for examination.

35 U.S.C. § 112 Rejection

Claims 1-30 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out the subject matter and distinctly claim the subject matter which Applicant regards as the invention. Applicant respectfully disagrees with this rejection.

The claim language rejected by the Examiner derives support and clarity from the specification and figures. For instance, on page 2 of the Office Action, the Examiner states in rejection “i.” that “it is unclear how the elements of the invention are connected to each other.” The Examiner then lists the various claim elements. However, Figure 3, for instance, particularly shows these various elements and their interrelation and connectivity. Further, paragraphs [0031] – [0040] explain Figure 3 in detail, including the particular elements pointed out by the Examiner. Thus, it appears that the Examiner is rejecting the claim language without placing that language within context of the rest of the application. Applicant respectfully requests that the Examiner view the claim language in context with the written specification and accordingly withdraw the rejection.

35 U.S.C. § 103 Rejection

Claims 1-3, 5-7, 9-11, 13-26 and 28-30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Flynn, et al., U.S. Patent No. 5,907,702 (“*Flynn*”) in view of

applicants admitted prior art “AAPA.” Applicant respectfully disagrees with this rejection.

Flynn discloses a method and apparatus for decreasing thread switch latency by storing instructions for an active thread in a primary instruction queue and storing instructions for a dormant thread in a thread switch instruction queue. The active thread is the thread currently being processed by the multithreaded processor, while the dormant thread is a thread not currently being executed by the multithreaded processor. During execution of the active thread, instructions are dispatched from the primary instruction queue for processing. When a thread switch occurs, instructions are dispatched from the thread switch instruction queue for execution. Simultaneously, instructions stored in the thread switch instruction queue are transferred to the primary instruction queue. See *Flynn* at Abstract.

AAPA includes specification paragraphs [0002] – [0006] and Figure 1.

Claim 1 of the present application recites a method, comprising:

receiving active thread state of a first active thread **using a virtual state mechanism;**
generating virtual thread state in accordance with the active thread state of the first active thread; and
forwarding the virtual thread state corresponding to the first active thread to state update logic. (emphasis added)

Applicant assert that *Flynn* and AAPA do not disclose or reasonably suggest, individually or in combination, using a virtual state mechanism or generating a virtual thread state in accordance with the active thread state of the first active thread. *Flynn* discloses storing thread instructions in an instruction queue and AAPA discloses the prior method of managing thread states *without* the use of a virtual state mechanism.

Because *Flynn* and AAPA do not disclose or suggest all the limitations of claim 1, Applicant respectfully requests that the Examiner withdraw the rejection for claim 1 and

its dependent claims. Further, independent claims 9, 15, 19, 23, and 28 contain language similar to claim 1; accordingly, Applicant respectfully requests that the Examiner withdraw the rejection and allow these claims and their corresponding dependent claims.

Claims 4, 8, 12 and 27 are rejected under 35 U.S.C. §103(a) as being unpatentable over Flynn, et al., U.S. Patent No. 5,907,702 (“Flynn”) in view of applicants admitted prior art “AAPA” and in view of Joy, et al U.S. Patent No. 6,341,347 (“Joy”). Applicant respectfully disagrees with this rejection. Because these rejected claims all depend from independent claims, for at least one of the reasons already discussed above, Applicant respectfully requests that the Examiner withdraw the rejection and allow the claims.

Conclusion

In light of the foregoing, reconsideration and allowance of the claims is hereby earnestly requested.

Invitation for a Telephone Interview

The Examiner is requested to call the undersigned at (303) 740-1980 if there remains any issue with allowance of the case.

Request for an Extension of Time

Applicant respectfully petitions for an extension of time to respond to the outstanding Office Action pursuant to 37 C.F.R. § 1.136(a) should one be necessary. Please charge our Deposit Account No. 02-2666 to cover the necessary fee under 37 C.F.R. § 1.17(a) for such an extension.

Charge our Deposit Account

Please charge any shortage to our Deposit Account No. 02-2666.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

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/Aslam A. Jaffery/

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